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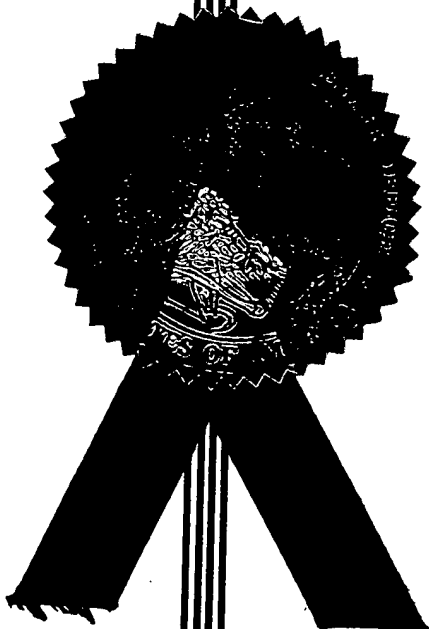
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*Jeffery M. Samuel*

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*Priscilla A. Fuller*

Attest



United States Patent [19]  
McMaster et al.

[11] Patent Number: 4,883,527  
[45] Date of Patent: Nov. 28, 1989

[54] GLASS SHEET BENDING AND TEMPERING  
APPARATUS

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[21] Appl. No.: 249,718

[22] Filed: Sep. 27, 1988

Related U.S. Application Data

[63] Continuation of Ser. No. 83,675, Aug. 7, 1987, Pat. No.  
4,822,398.

[51] Int. Cl.<sup>4</sup> ..... C03B 23/03  
[52] U.S. Cl. .... 65/273; 65/104;  
65/106; 65/289; 65/290; 65/348; 65/351  
[58] Field of Search ..... 65/104, 106, 107, 273,  
65/289, 290, 348, 35

[56]

References Cited

U.S. PATENT DOCUMENTS

4,111,676 7/1978 Mechling et al. .... 65/104 X  
4,376,643 3/1983 Kahle ..... 65/273 X  
4,483,703 11/1984 Kellar et al. .... 65/106 X

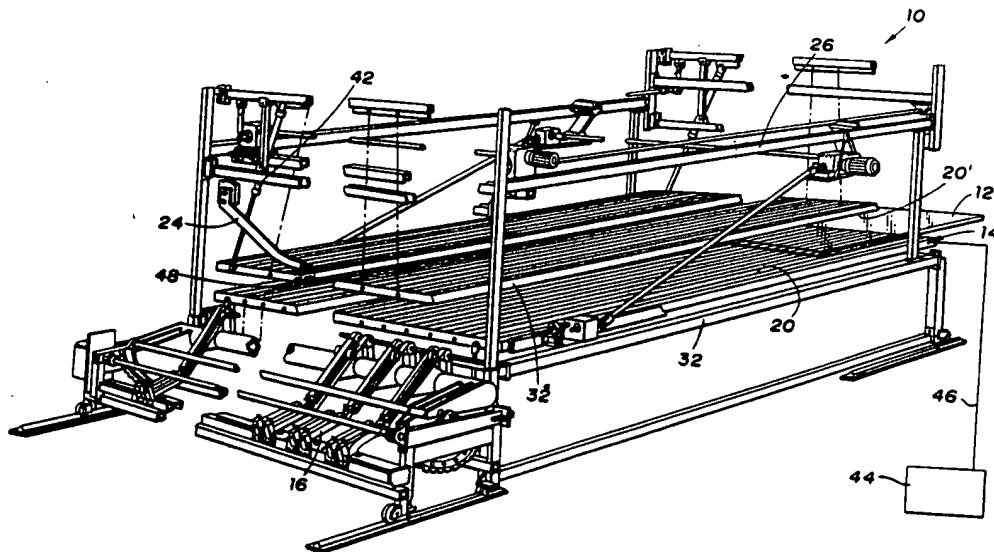
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Attorney, Agent, or Firm—Brooks & Kushman

[57]

ABSTRACT

A glass bending and tempering apparatus (10) is disclosed as including a first platen (14) for receiving a heated glass sheet (12) to be bent. The first platen (14) is deformable and includes an actuator (16) for deforming platen (14) from a planar shape to a bent shape. A second platen (22) is mounted above lower platen (14) for bending and quenching glass sheet (12) therebetween the platens. A template (24) is located on the other side of the second platen (22) away from glass sheet (12). Second platen (22) is pressed against template (24) as first platen (14) is deformed from the planar shape to the bent shape to bend the heated glass sheet thereagainst second platen (22), the second platen (22) conforming to template (24). Quenching gas is supplied by both platens (14,22) through quench openings (18) that move with the platens (14,22) to temper the bent glass sheet between the platens.

16 Claims, 6 Drawing Sheets



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